Connecticut Department of
ENERGY &
ENVIRONMENTAL
PROTECTION

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National Emission Standards for Hazardous Air Pollutants for Reciprocating Internal Combustion Engines (RICE Rule) Training Module 40 CFR 63 Subpart ZZZZ Script- Area Existing Emergency CI >500 HP

NARRATOR:
[Slide 2:]
Welcome to the Connecticut Department of Energy & Environmental Protection's Online Training for the National Emission Standards for Hazardous Air Pollutants for Reciprocating Internal Combustion Engines, also known as the RICE Rule!

This tool is designed to help owners and operators of reciprocating internal combustion engines, also known as RICE, determine their requirements under 40 CFR Section 63, subpart ZZZZ. By answering the successive questions, your specific requirements have been estimated. Please note that they may not be complete, and refer any questions to your local authority.

[Slide 3:]
We have established that your engine is an existing emergency compression ignition engine, greater than 500 horsepower, located at an area source. Now, let's discuss your requirements.

Every 500 hours of operation or annually, whichever comes first, you must change the oil and filter. Note that an oil analysis program can be used to extend the oil change requirement; however, the oil analysis program must meet the following requirements:

- The oil analysis must be performed every 500 hours of operation or annually, whichever comes first. The oil analysis must analyze the parameters shown here to demonstrate that they do not exceed certain condemning limits, otherwise you are required to change the oil within two business days of receiving the results of the analysis or before operating the engine.

In addition to changing the oil and filter, you must also inspect all hoses and belts and replace as necessary every 500 hours of operation or annually, whichever comes first.

[Slide 4:]
Every 1,000 hours of operation or annually, whichever comes first, you must perform an inspection of the air cleaner, and replace it when necessary.

In addition to these work practice standards, be sure to operate and maintain all equipment in accordance with safety and good air pollution control practices for minimizing emissions.

[Slide 5:]
Starting in 2015, if you operate, or commit to operate, more than 15 hours annually as part of an emergency demand response program or for reliability criteria, you must meet certain requirements.

- First, you will be required to use ultra low sulfur diesel. Note that engines in Guam, American Samoa, the Commonwealth of the Northern Mariana Islands, areas of Alaska not accessible by the Federal Aid Highway System, remote areas of Alaska, or on offshore vessels are not required to use ultra low sulfur diesel.
- Additionally, you will need to submit an annual report each year. The report must contain:
    - The address where the engine is located
    - The date of the report

    - The beginning and ending dates of the reporting period
    - The engine site rating and model year
    - The latitude and longitude of the engine
    - Hours operated for Emergency Demand Response
    - Number of hours the engine is contractually obligated to be available for Emergency Demand Response
    - Hours spent operating to supply power as part of a financial arrangement with another entity.
    - If no deviations occurred from the fuel requirements that apply to the engine, a statement indicating so.
    - Lastly, if there were any deviations, information on the number of deviations, cause, and the corrective actions taken.
- The first report will cover calendar year 2015, and is due on March 31st, 2016.
- The annual report will be required to be submitted electronically in the "Compliance and Emissions Data Reporting Interface," which can be accessed through EPA's Central Data Exchange using the link provided here.
- Please take note that engines committing to run 15 hours or less on an annual basis for emergency demand response that are not used for local reliability criteria do not have the fuel requirements and reporting requirements described above.

[Slide 6:]
Now, let's discuss your monitoring requirements. You must operate and maintain the engine and any after-treatment control device according to the manufacturer's instructions, *or* develop your own maintenance plan which provides for maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions.

A non-resettable hour meter must be installed to record hours of operation.

You must minimize the engine's time at idle during startup. Also, minimize the engine's startup time to a period needed for appropriate and safe loading; this period cannot exceed 30 minutes.

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The following constitute the compliance requirements for your engine.

- There is no limit on hours of operation for emergency service (for example, in the case of a hurricane or ice storm).
- You may operate the engine up to 100 hours per year for:
    - Maintenance checks and readiness testing, as long as the tests are recommended by federal, state, or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. You can petition EPA for additional hours to be used for maintenance checks and readiness testing. However, a petition is not necessary if you keep records showing that federal, state, or local standards require maintenance and testing of the engine in excess of 100 hours per calendar year.
    - Emergency Demand Response
    - Periods during which there is a deviation of voltage or frequency of 5% or more below standard voltage or frequency.

- You may operate up to 50 hours per calendar year to head off potential voltage collapse, or line overloads that could result in local or regional power disruption. These 50 hours will be counted as part of the 100 hours per calendar year for maintenance and testing and demand response.
- Up until the date specified on the screen, these 50 hours can be used at area sources for peak shaving or non-emergency demand response to generate income or to otherwise supply power as part of a peak shaving or load management program with the local distribution system operator. The power must be provided only to the facility itself or to support the local distribution system.
- If your emergency engine operates in excess of the allowable hours for non-emergency purposes, or fails to meet any other requirements specified for emergency engines, the engine must meet all non-emergency engine requirements.
- In addition to meeting these federal emergency engine requirements, emergency engines must meet any applicable State requirements for emergency engines.

[Slide 8:]
Now, we will discuss the Connecticut Emergency Engine Requirements. According to the Regulations of Connecticut State Agencies Section 22a-174-22(a)(3), an emergency engine provides mechanical or electrical power only during testing and scheduled maintenance, during an actual emergency, or in accordance with a contract ensuring electricity for use within the state during an OP 4, Step 6 event. An engine for which the owner or operator is party to any other agreement to sell electrical power from such engine to an electricity supplier, or otherwise receives any reduction in the cost of electrical power for agreeing to produce power during periods of reduced voltage or reduced power availability is **not** considered an emergency engine in the state of Connecticut.

Engines operating under Sections 22a-174-3b and 3c of the Regulations of Connecticut State Agencies are subject to additional requirements.

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This table shows a comparison of federal and State of Connecticut emergency engine requirements. Take note that engines operating under Section 3b must limit emergency operation to 300 hours per year, and must limit nongaseous fuel consumed by the engine to 0.0015% sulfur content, dry basis. Engines operating pursuant to Section 3c have no limit on emergency hours of use or fuel sulfur content; however, the facility's fuel purchases are very limited.

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In order to demonstrate that you are in compliance with all rule requirements, you must keep the following records:
- The maintenance conducted on the engine and after-treatment control device, if any, to show that they were operated and maintained according to your site-specific maintenance plan
- Records of hours of operation, as recorded through the non-resettable hour meter
- Records indicating the number of hours the engine was used for emergency operation. Each instance of emergency operation should also provide an explanation as to what classified the operation as emergency.
- Records of hours used for non-emergency operation
- Also keep records of the notification of the emergency situation and the time the engine is operated if it is used for demand response, periods where there is a deviation of voltage or frequency of 5% or greater below standard voltage or frequency, or as a power source as part of a financial arrangement.

All records must be kept for 5 years from the date of creation.

[Slide 11:]
You must be in compliance with all applicable requirements of this rule by the date shown on screen.

[Slide 12:]
If you would like more information about the RICE rule, please visit the EPA RICE Compliance web page at the address provided. This site provides resources such as Q and A documents, fact sheets, sample notification forms, and recordings of webinars, all of which are designed to help you comply with this rule.

[Slide 13:]
Let's summarize the requirements for your area source existing emergency compression ignition engine, greater than 500 horsepower, under this rule.

- You must change the oil and filter, inspect the hoses and belts and replace as necessary every 500 hours of operation or annually, whichever comes first
- You must inspect the air cleaner every 1,000 hours of operation or annually, whichever comes first, and replace if necessary
- You must operate and maintain the unit according to the manufacturer's written instructions or develop your own site-specific maintenance plan
- You must install a non-resettable hour meter

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- There is no limit on the number of hours that may be used for emergency operation, unless the unit is subject to Section 22a-174-3b or 3c of the Regulations of Connecticut State Agencies.
- You may operate the engine a total of 100 hours per year for maintenance and testing, demand response in Energy Emergency Alert Level 2 situations, operation during at least a 5% or more change in voltage, or operation for up to 50 hours to head off potential voltage collapse, or line overloads that could result in local or regional power disruption.
- Emergency engines must meet all applicable state requirements in addition to the federal requirements. Emergency engines located in Connecticut cannot operate during non-emergencies.
- Starting in 2015, if the unit operates more than 15 hours per calendar year for emergency demand response or is used for local reliability criteria, you must use ultra low sulfur diesel and submit an annual report.
- Engines operated 15 hours or less per calendar year for emergency demand response have no ultra low sulfur diesel or electronic reporting requirements under the rule.
- If an emergency engine operates for more than allowable hours for non-emergency purposes or fails to meet any other emergency engine requirements, it will need to meet all non-emergency engine requirements.
- You must keep records of maintenance conducted, total hours of operation, hours of emergency operation including what classified the operation as emergency, hours of non-emergency operation (if allowed), notification of emergencies and the time of operation during use for demand response, periods where there is a deviation of voltage or frequency, and supplying power as part of a financial arrangement.
- All records must be retained for 5 years.
- Your engine must be in compliance with all requirements of this rule by the date shown on screen.